

In the Claims

1-9. (cancelled)

10. (new) A process for producing adhesion elements on a substrate, comprising the steps of:

introducing plastic material into at least one shaping element; and

forming the plastic material into adhesion elements with flared ends accomplishing adhesion predominantly by van-der-Waals forces, the flared ends forming heads with essentially flat end surfaces.

11. (new) A process according to claim 10 wherein

the plastic material is selected from the group consisting of inorganic and organic elastomers, polyvinyl siloxane, and additional-crosslinking silicone elastomers in binary systems and acrylates.

12. (new) A process according to claim 10 wherein

the plastic material is thixotropic, and has a viscosity of 7,000 to 15,000 mPas measured with a rotary viscosimeter.

13. (new) A process according to claim 12 wherein

the viscosity is approximately 10,000 mPas at a shear rate of 10 1/sec.

14. (new) A process according to claim 10 wherein

the shaping element is a drum-shaped screen having at least 10,000 mold cavities per cm².

15. (new) A process according to claim 14 wherein

the shaping element has 16,000 mold cavities per cm².

16. (new) A process according to claim 14 wherein

each of the mold cavities has a hyperboloid shape.

17. (new) A process according to claim 10 wherein

the plastic material has a contact angle greater than 60 degrees due to surface energy for wetting with water.

18. (new) A process according to claim 17 wherein

the contact angle is greater than 70 degrees.

19. (new) A process according to claim 10 wherein

the adhesion elements have stem parts with a height from 50 µm to 150 µm and with a diameter from 10 µm to 40 µm, and have flared ends with a diameter from 15 µm to 70 µm.

20. (new) A process according to claim 19 wherein

the height of the stems is approximately 90 µm;

the diameter of the stems is approximately 30 μm ; and

the diameter of the flared end is approximately 50 μm .

21. (new) A process according to claim 10 wherein

the plastic material is cross-linked with or after molding of the adhesion elements.

22. (new) A process for producing adhesion elements on a substrate, comprising the steps of:

introducing plastic material into at least one shaping element; and

forming the plastic material into adhesion elements with flared ends accomplishing adhesion predominantly by van-der-Waals forces, the flared ends forming heads with slightly convex end surfaces.

23. (new) A process according to claim 22 wherein

the plastic material is selected from the group consisting of inorganic and organic elastomers, polyvinyl siloxane, and additional-crosslinking silicone elastomers in binary systems and acrylates.

24. (new) A process according to claim 22 wherein

the plastic material is thixotropic, and has a viscosity of 7,000 to 15,000 mPas measured with a rotary viscosimeter.

25. (new) A process according to claim 24 wherein

the viscosity is approximately 10,000 mPas at a shear rate of 10 1/sec.

26. (new) A process according to claim 22 wherein

the shaping element is a drum-shaped screen having at least 10,000 mold cavities per cm².

27. (new) A process according to claim 26 wherein

the shaping element has 16,000 mold cavities per cm².

28. (new) A process according to claim 26 wherein

each of the mold cavities has a hyperboloid shape.

29. (new) A process according to claim 22 wherein

the plastic material has a contact angle greater than 60 degrees due to surface energy for wetting with water.

30. (new) A process according to claim 29 wherein

the contact angle is greater than 70 degrees.

31. (new) A process according to claim 22 wherein

the adhesion elements have stem parts with a height from 50 µm to 150 µm and with a diameter from 10 µm to 40 µm, and have flared ends with a diameter from 15 µm to 70 µm.

32. (new) A process according to claim 31 wherein

the height of the stems is approximately 90 µm;

the diameter of the stems is approximately 30 µm; and

the diameter of the flared end is approximately 50 µm.

33. (new) A process according to claim 22 wherein

the plastic material is cross-linked with or after molding of the adhesion elements.

34. (new) A process for producing adhesion elements on a substrate, comprising the steps of:

introducing plastic material into at least one shaping element; and

forming the plastic material into adhesion elements with flared ends accomplishing adhesion predominantly by van-der-Waals forces, the flared ends forming heads with end surfaces having a concavity.

35. (new) A process according to claim 34 wherein

the plastic material is selected from the group consisting of inorganic and organic elastomers, polyvinyl siloxane, and additional-crosslinking silicone elastomers in binary systems and acrylates.

36. (new) A process according to claim 34 wherein

the plastic material is thixotropic, and has a viscosity of 7,000 to 15,000 mPas measured with a rotary viscosimeter.

37. (new) A process according to claim 36 wherein

the viscosity is approximately 10,000 mPas at a shear rate of 10 1/sec.

38. (new) A process according to claim 34 wherein

the shaping element is a drum-shaped screen having at least 10,000 mold cavities per cm².

39. (new) A process according to claim 38 wherein

the shaping element has 16,000 mold cavities per cm².

40. (new) A process according to claim 38 wherein

each of the mold cavities has a hyperboloid shape.

41. (new) A process according to claim 34 wherein

the plastic material has a contact angle greater than 60 degrees due to surface energy for wetting with water.

42. (new) A process according to claim 41 wherein

the contact angle is greater than 70 degrees.

43. (new) A process according to claim 34 wherein

the adhesion elements have stem parts with a height from 50 µm to 150 µm and with a diameter from 10 µm to 40 µm, and have flared ends with a diameter from 15 µm to 70 µm.

44. (new) A process according to claim 43 wherein

the height of the stems is approximately 90 µm;

the diameter of the stems is approximately 30 µm; and

the diameter of the flared end is approximately 50 µm.

45. (new) A process according to claim 34 wherein

the plastic material is cross-linked with or after molding of the adhesion elements.